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ABSTRACT

This variable rule analysis of the indefinite article "an" was done by means of a computer program developed by H. Cedergren and D. Sankoff of Montreal. The data was collected from 45-minute interviews with three different groups of college students essentially alike in age: (1) 13 whites from Louisiana, (2) 12 blacks from southwestern Ohio, and (3) 10 whites from southwestern Ohio. Attempts were made to induce the production of "an" by three different tests or linguistic "games." The following conclusions were drawn: (1) There is a wide variation in the pronunciation of the indefinite article before beginning with a vowel. It is often "schwa," and sometimes the article is dropped entirely. Reduction of "an" to "schwa" occurs most frequently for black speakers. (2) Where there is evidence of style shifting for the black informants because of the race of the interviewer, the variation between "schwa" and "an" does not show style shifting. (3) The feature that favors the deletion of /n/ the most is a pause between the article and the following word. It is noted that more data from a wider range of social classes, ages, and styles, and from more varied geographic regions, are needed to substantiate this work. (PP)

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A VARIABLE RULE ANALYSIS OF THE INDEFINITE ARTICLE AN

A paper presented at the Annual Meeting of the Linguistic Society of America, San Diego, Calif., December 28, 1973.

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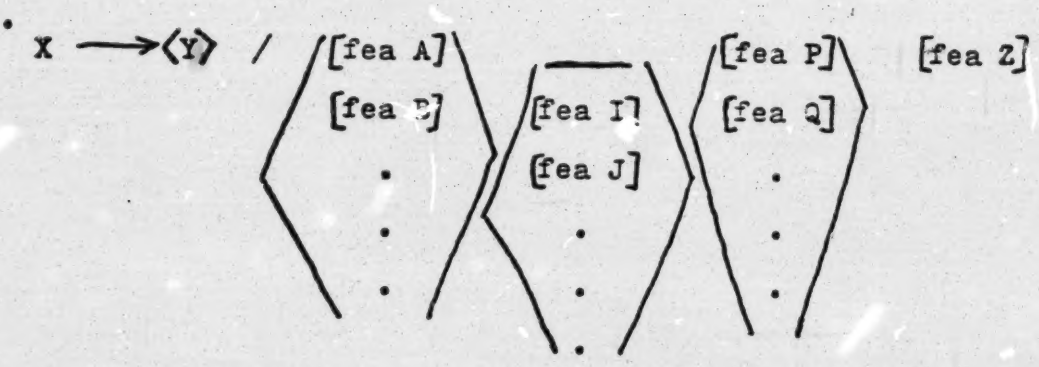
Robert A. Terrebonne

A Variable Rule Analysis of the Indefinite Article *an*

This paper is a variable rule analysis of the indefinite article *an*, particularly in terms of a computer program developed by Henrietta Cedergren and David Sankoff of Montreal. To briefly summarize the theoretical basis of the analysis, I am dealing with variable rules of the form shown in no. 1 on the Handout. X variably goes to Y, as conditioned by features A,B,I,J,etc., which are in angled brackets. Feature Z represents a minimal feature which must be present in order for the rule to apply.

1.



from H. Cedergren and D. Sankoff "Variable Rules: Performance as a Statistical Reflection of Competence" (to appear in *Language*).

The computer program I worked with uses a maximum likelihood estimation procedure to assign probabilities to the various features of the rule according to the assumptions that the features act independently and that their combined effects are multiplicative. It calculates probabilities ac-

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cording to both a non-application multiplicative model and an application multiplicative model. By the first of these we get the probability that a feature will cause the rule to apply, and by the second the probability that a feature will permit the rule to apply. Mathematically the formula for the non-application probabilities multiplicative model is given in no. 2 on the Handout. The one for the application probabilities multiplicative model is in no. 3 on the Handout.

2. $p = 1 - (1-p_o) \times (1-p_i) \times (1-p_j) \times \ldots$

3. $p = p_o \times p_i \times p_j \times \ldots$

In each case p_o is the input probability and p_i, p_j, etc., are the probabilities for the various features in the rule.

After calculating the probabilities, the program then uses them to predict the number of rule applications for each environment and compares the predicted frequencies with the number of rule applications actually observed in the data.

The linguistic feature that I have used this program to study is the indefinite article an. An traditionally is the form of the indefinite article used before vowels, although the use of a/ə/ before vowels has been noted, for example, in Webster's III, where the forms "a oak" and "a apron" are given as occurring "in some dialects." The use of a/ə/ before vowels in Black English Vernacular and in Southern dialects has been mentioned by Labov in The Study of Nonstandard English and also

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by Fasold and Wolfram in their article "Some Linguistic Features of Negro Dialect." Fasold and Wolfram further note that another variant is a deleted article as in "He had eraser" and "He had erector set." They imply that the indefinite article is invariably a/ə/ for BEV speakers: the article is a "regardless of how the following word begins." For the deleted article they explain that it occurs before polysyllabic words whose first vowel is /ə/ and that the deletion is due to elision or "merging" of the two /ə/'s. Finally they note also the occurrence of the deleted article before consonants and suggest that this absence is a grammatical feature instead of a phonetic one.

In my own research I have recorded not only variants like the ones just described, but also examples like those given in no. 4 on the Handout. First of all are the usual pronunciation variants like those mentioned in dictionaries such as Webster's III:

4. A. Emphatic or Contrastive stress

"[He] makes extractions, makes an /ǽn/ extraction."
White male, college freshman, Dayton, Ohio

"She made a /éy/, an /ǽn/ excuse."
White female, college freshman, Dayton, Ohio

B. Syllabic /n/

"They had an /hædṛ/ argument."
White female, college sophomore, Cincinnati, Chio

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Next are regular pronunciation variants which occur less frequently and which are not listed in dictionaries:

C. Contracted form

"It'll have 'n effect." /hǽvnəfɛ́k/
Black male, college freshman, Dayton, Ohio

D. Nasalized vowel

"They have an /ɔ̃/ understanding."
Black male, college freshman, Springfield, Ohio

Other variants occur when there is a pause between the article and the following word:

E. Lengthened /n/

"A person from Iceland is an /ənː/ (Pause) Icelander."
White female, college freshman, Dayton, Ohio
"A person from Arizona is an /ənː/ (Pause), is a Arizonian."
White male, college freshman, Dayton, Ohio

F. Lengthened /ə/, deleted /n/

"Are you from a /əː/ (Pause) all-black high school?"
Black male, college freshman, Columbus, Ohio

G. Stressed /éy/, deleted /n/

"A person from Alabama is a /éy/ (Pause) Alabamian."
White male, college freshman, Dayton, Ohio
"We needed a /éyəː/ (Pause) independent individual."
William Ruckelshaus on "The Dick Cavett Show," Oct. 30, 1973

Stressed /ey/ can also occur without a following pause, as in the examples in H, which represent the formal style of a television interview.

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H. Stressed /éy/, no pause

"[It] offers Phillips a /éy/ opportunity to . . . "
William Keeler, Chairman of the Board (ret.), Phillips Petroleum, Bartlesville, Okla., on CBS program "The Corporation," Dec. 6, 1973

" We started a /éy/ inquiry of sorts."
Bryce Harlow, on CBS News, Nov. 4, 1973

As I have stated, I also found variants like those mentioned by Fasold and Wolfram, where /ə/ alone is used or the entire article is deleted, but they weren't limited to Black informants nor to White Southerners. In addition, the deleted article is not restricted phonetically in the way Fasold and Wolfram have stated. Examples of these variants are given in no. 5 on the Handout:

5. A. Deleted /n/

1) "I was gonna get a /ə/ F."
Black male, college freshman, Dayton, Ohio

2) "This friend a mine wanted me to work on a /ə/ off-shore rig."
White male, college freshman, New Orleans, La.

but also other speakers:

3) "I was lookin' through a /ə/ old article."
White male, shipping clerk, age 22, Dayton, Ohio

4) "strong as a /ə/ ox."
White male, English professor, age 60+, Muncie, Ind. (grew up in the Carolinas)

5) "It's a /ə/ elementary school."
White male, college junior, Dayton, Ohio (grew up in California)

6) "It's just a /ə/ appetizer."
White female, Ph.D. candidate, age 38, Dayton, Ohio (grew up in Kansas City)

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7) "It might be a /ə/ airplane."
White female, housewife, age 70+, Vandalia, Ohio (Interviewed on local TV news, Nov. 12, '73)

8) "Age is a /ə/ attitude."
George Blanda, NBC News, Nov. 2', 1973

9) "There's a /ə/ interesting thesis that comes from MIT."
John Robert Ross, Georgetown Univ., Oct. 26, '73

B. Entire article deleted:

1) Polysyllabic word beginning with /ə/
"Some quack doctor that's givin' abortion"
Black female, college freshman, Dayton, Ohio

but also other environments:

2) Following a /ə/
"go to /tə/ all-black college"
Black male, college freshman, Dayton, Ohio

3) Before /r̃/
"to set example /ɪgzǽmpəl/ for the others"
Black male, college freshman, Columbus, Ohio

4) Other environments
"every place where incident takes place"
Black female, college freshman, Dayton, Ohio
"English course is like a . . . history course"
Black female, college freshman, Dayton, Ohio
"I got A out of it"
Black female, college freshman, Dayton, Ohio

also with white informants:

5) "She's moving from an apartment here to apartment next door."
White male, college freshman, New Orleans, La.
"They had energy crisis."
White male, English professor, age 33, Dayton, Ohio (grew up in Louisiana)
"[It] gives you /yə/ idea."
White male, college freshman, Dayton, Ohio

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"A place where airplane lands is an airport."
White female, college freshman, Dayton, Ohio

These examples illustrate the range of variation I found in the indefinite article before a word beginning with a vowel. The specific rule that I have studied is the one that deletes the /n/, producing variation between /ən/ and /ə/, as in "I made an A" vs. "I made a A." In addition I will make some comments on cases where the entire article is deleted. Therefore I will not be considering examples like those in no. 4 on the Handout (except for a brief discussion of the effect of a pause), but only those like the ones in no. 5.

One other very common occurrence of an is before other in the word another. The /n/ was not lost before other except in only two cases where the speaker paused before other. (See no. 6 on the Handout.) In only one instance was there deletion of the whole article before other (given in no. 7 on the Handout). Since there was so little variation before other, occurrences of an in this context were noted, but no attempt was made to include them in the variable rule analysis.

6. "Now I have a /ə:/ (Pause) other one."
White male, college freshman, Mandeville, La.
(Pause)
"If I had to go to a /ə:/ other kin' a school."
Black male, college freshman, Dayton, Ohio

7. "just one nigger boy tryin' to see if he was stronger than other nigger boy."
Black male, college freshman, Dayton, Ohio

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For the variable rule analysis, then, the main concern is with a rule like the one given in no. 8 on the Handout. The underlying form of the indefinite article $\hat{a}$ is taken to be //æn// and vowel reduction is assumed to have already applied. Features in the preceding and following environments that affect the rule will be added later. The * indicates that the rule is categorical when a consonant follows.

$$8.\quad n \longrightarrow \langle \emptyset \rangle \;/\; ə \begin{bmatrix} \underline{\quad} \\ +\text{Art} \\ -\text{def} \end{bmatrix} \quad \# \quad \begin{matrix} *[-\text{syll}] \\ \langle [+\text{syll}] \rangle \end{matrix}$$

The data for this study was collected from interviews with three different groups of college students. One is a group of White Southerners from Louisiana. There were two interviews of approximately 20 minutes each from 13 students, all males. The second group was composed of Black college students from southwestern Ohio, 6 males and 6 females. There were two interviews, each lasting about an hour, with each informant. One interview was conducted by a Black student, the second by a White interviewer. The third group was a class of White college freshman from southwestern Ohio, with 6 males and 6 females. Each student had a 45 minute interview, and there was an attempt to enrich the data for an by three different "tests" or linguistic "games."

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All three groups are essentially alike in age, and where there is data for both sexes the number of males and females is balanced. The style of each interview is predominantly careful interview style. There is little casual style in these interviews, except mainly for parts of those for the Black Midwest group conducted by a Black interviewer. And for this group there was an attempt to study the effects of style shifting on an variation. The main variables, though, are region (Groups 1 and 3) and race (Groups 2 and 3).

The first group, the White Southerners, showed a relatively high degree of variation. There were 41 cases of /n/ deletion out of 79 possible instances, or 52%. (Included in the 41 are cases where the entire article is deleted since it was assumed that deletion takes place in two stages, /n/ deletion followed by /ə/ deletion.)

For the Cedergren/Sankoff program the factors given in no. 9 on the Handout were decided on after some experimenting with different groups of factors.

9. Factor groups:

Syntactic:

H (headword) : __N "an example"

A (adjective, or any modifier that is not a noun): __Adj N "an old man," "an all-black school," "a in-class theme"

C (compound, or noun adjunct): __N N "an English teacher," "a extension pole," "an airplane"

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Phonetic:

Preceding: N: a nasal cons.
X: anything else

Following: S: a stressed vowel
U: an unstressed vowel
O: a nasal consonant
Y: anything else

The primary difference between A and C is that the modifiers in A can be derived from a relative clause ("an old man"="a man who is old"), but those in C cannot ("an English teacher" ≠"a teacher who is English"). For the different phonological factors, in the preceding environment there may be a nasal consonant (represented by N). In the following environment first there can be either a stressed or an unstressed vowel (S and U, respectively), followed by a consonant, which may be a nasal (represented by O). The variable rule that contains these features can be written as in no. 10 on the Handout.

10. $n \longrightarrow \langle \emptyset \rangle \; / \; \langle [+\text{nasal}] \rangle \; C_o \; \#\# \; \ominus \begin{bmatrix} ____ \\ +\text{art} \\ -\text{def} \end{bmatrix} \; \# \; * \begin{bmatrix} -\text{syll} \\ \\ \left\langle \begin{bmatrix} +\text{syll} \\ +\text{stress} \\ \\ +\text{N} \\ +\text{Adj} \\ +\text{Ncompd} \end{bmatrix} \right\rangle \end{bmatrix} \; \langle [+\text{nasal}] \rangle$

These factor groups give a total of 24 possible environments. I was able to collect data for 20 of these from the interviews. Feeding this data into the computer program gave the following results:

1) The nonapplication probabilities multiplicative model

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produced an analysis that fit the data better than the application model.

2) The probabilities assigned to the different features are given in no. 11 on the Handout.

3) The predicted vs. observed values of the number of rule applications for the different environments are given in Taole 1 (no. 12 on the Handout).

For this group, then, the features are weighted

1. Compound
2. Following nasal
3. Preceding nasal
4. Headword

11. Non-application probabilities model ($p_o = 0.25$)

H - 0.17 N - 0.25 S - 0.01 O - 0.58
A - 0.0 X - 0.0 U - 0.0 Y - 0.0
C - 0.71

12. Table 1. Predicted vs. Observed Frequencies
(White Southerners)
(Predicted values in ().)

	H			
	N		X	
	S	U	S	U
O	2 (1.6)	---	1 (2.9)	1 (0.7)
Y	2 (1.6)	0 (1.1)	10 (10.0)	3 (1.9)

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	A			
	N		X	
	S	U	S	U
O	1 (0.8)	2 (1.5)	3 (2.1)	---
Y	1 (0.9)	---	3 (3.1)	0 (0.5)

	C			
	N		X	
	S	U	S	U
O	1 (0.9)	2 (2.5)	4 (4.6)	1 (0.9)
Y	1 (0.8)	---	1 (0.8)	2 (1.6)

The second group is the Black students from Ohio. Again the frequency of /n/ deletion is fairly high, 108 out of 165 possible occurrences, or 65%. The syntactic and phonological factors for the analysis of this group are the same as for the preceding one. However, since I had both female and male informants, I added sex as a factor group. Also, since I had two interviews from each informant, one with a White interviewer and one with a Black interviewer, I added the race of the interviewer as another factor group. Presumably the race of the interviewer should cause some style shifting towards a more formal style for a White interviewer. These factor groups gave a total of 96 possible environments. I was able to collect data for 42 environments. The nonapplication probabilities model assigned the probabilities to the different features

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given in no. 13 on the Handout. The predicted vs. observed number of rule applications are given in Table 2(no. 14 on the Handout). For the linguistic factors there is the following ranking:

1. Compound
2. Headword
3. Following nasal, Stressed vowel
4. Preceding vowel

13. Non-application probabilities model ($p_o = 0.09$)

H - 0.34	N - 0.04	S - 0.29	O - 0.29	M - 0.32	W - 0.42
A - 0.0	X - 0.0	U - 0.0	Y - 0.0	F - 0.0	B - 0.0
C - 0.39					

More interesting, though, are the sex and race factors. Males apply the rule more frequently than females. The race of the interviewer has the opposite effect than what would be expected in terms of style shifting. It is natural to assume that Blacks would use a more careful style with a White interviewer than with a Black interviewer, and in general the two interviews for each informant do follow this pattern. It also seems reasonable that there would be less /ə/ for an in a more careful style. However, the White interviewer is the factor that favors the rule the most. This suggests that the use of /ə/ for an is not sensitive to style shifting like other variables such as -in' for -ing which do correlate with style and social stratification.

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14. Table 2. Predicted vs. Observed Frequencies
(Black Midwesterners)
(Predicted values in ().)

I. Males, Black Interviewer:

	H			
	N		X	
	S	U	S	U
O	---	---	4 (4.0)	---
Y	2 (1.4)	0 (0.6)	9 (10.6)	8 (4.7)

	A			
	N		X	
	S	U	S	U
O	---	---	---	---
Y	2 (1.7)	---	4 (3.3)	0 (0.4)

	C			
	N		X	
	S	U	S	U
O	---	---	0 (0.8)	---
	---	---	3 (2.9)	---

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II. Males, White Interviewer:

	H			
	N		X	
	S	U	S	U
O	---	---	4 (3.5)	0 (0.8)
Y	1 (0.8)	---	10 (10.8)	2 (2.3)

	A			
	N		X	
	S	U	S	U
O	---	---	1 (0.8)	---
Y	1 (1.5)	---	4 (4.4)	---

	C			
	N		X	
	S	U	S	U
C	---	---	0 (0.9)	---
Y	1 (0.9)	---	1 (0.8)	---

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III. Females, Black Interviewer:

	H			
	N		X	
	S	U	S	U
O	---	---	3 (2.1)	2 (1.7)
Y	1 (1.2)	1 (1.3)	9 (9.1)	6 (6.7)

	A			
	N		X	
	S	U	S	U
O	---	---	---	0 (0.4)
Y	---	---	1 (1.4)	---

	C			
	N		X	
	S	U	S	U
O	---	---	---	---
Y	---	---	---	---

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IV. Females, White Interviewer:

	H			
	N		X	
	S	U	S	U
O	1 (0.8)	---	1 (0.8)	1 (0.8)
Y	1 (0.8)	0 (0.7)	12 (12.0)	2 (2.6)

	A			
	N		X	
	S	U	S	U
O	---	---	---	---
Y	---	1 (0.5)	2 (1.9)	1 (0.5)

	C			
	N		X	
	S	U	S	U
O	---	---	3 (2.5)	---
Y	1 (0.8)	---	2 (1.5)	---

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White college students from southwest Ohio constitute the third group studied. For this group I attempted to enrich the data to give me more examples of an per interview, for the occurrence of an is relatively rare. In an interview of 45 min. to an hour, it is not unusual to get only 4 or 5 instances of an. I devised three different "tests" or linguistic "games," which took up between 1/3 and ½ of each 45 min. interview. I told the students that what I was exploring was different ways of saying the same thing. The first set of questions was a kind of dialectology survey dealing with lexical differences. I asked them about some of the usual variants like pail/bucket, sack/bag, but I also included words like car/automobile, plane/airplane, airport/air base/landing strip, and architect/engineer/inventor. The second test involved nominalizations. I said a sentence with a verb and the student was to say the same thing but to change the verb into a noun. For example, my sentence "He judges their performance" the student was to transform into "He makes a judgement of their performance." By using verbs like arrange, open, enter, illustrate, etc., I was able to get many nouns beginning with a vowel. The third test was a game about what people from different places are called. (One student told me that this same thing was actually done on a television game show.) I would say the name of a country or state and the student was to say what a person from there is called. For example: "Texas." "A person from Texas is a Texan." (Occasionally I got responses like "A person from England is English" instead of "is an Englishman.") This game usually ended when

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we came to place names like Connecticut and Delaware, or when we started talking about alternate names like Hoosiers and Okies.

These tests did enrich the data, for out of twelve 45 min. interviews I was able to collect 279 possible instances of an. Moreover, they did not skew the data by giving a very formal, unnatural style, because the rate of /n/ deletion for the total interview (16%) was not significantly different from the rate (17%) during the part of the interview that included normal conversation and the dialectology test, which was carried out in normal converstion and did not require the informant to respond with a set sentence.

Out of 279 possible occurrences of an only 45 had /ə/ for an so that the rate of /n/ deletion for this group was 16%, much lower than that for the Black students (65%) and for the Southern Whites (52%). In addition, even this figure, 45, is somewhat high because it includes 15 occurrences out of 16 possible instances of /ə/ when there was a pause between the article and the following word. (Pause was not included in the analysis of the other two groups because of its very low frequency--only once for the Southerners, seven times for the Blacks.) If pause is eliminated from the totals, then the White Midwesterners used /ə/ for an only 30 times out of a possible 263 instances, or 11% of the time.

I have included pause in my analysis of this group, however, because it is a significant factor in reducing an to /ə/, and also it is obvious that the tests I gave to this group

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encouraged this kind of style. In this connection it is interesting to note what happened twice when I called someone's attention to the fact that he had said /ə/ for an. These were not informants from my test group, but the elderly English professor who said "strong as a ox" and the student who said "It's a elementary school." They both gave the same explanation. Although no pause was audible as they spoke, they both said that they hesitated after the article because they couldn't think of the following word immediately. The English professor said he was trying to think up an original simile, the student said he just couldn't recall the word he wanted.

Counting pause (P) and no pause (T) as a factor group and then feeding the data into the computer gave the results given in nos. 15 and 16 on the Handout. Again these are for the nonapplication probabilities model. Table 3 gives the predicted vs. observed occurences of /ə/ for the different environments. (I was able to find data for 32 environments out of a possible 96.) The effects of the different features are ranked

1. Pause
2. Preceding nasal
3. Compound
4. Unstressed vowel

However, the figures for all but the first of these are so small that they are probably not significant.

15. Non-application probabilities model ($p_o = 0.09$)

H - 0.0	N - 0.08	P - 0.93	S - 0.0	O - 0.0	M - 0.0
A - 0.0	X - 0.0	T - 0.0	U - 0.03	Y - 0.0	F - 0.02
C - 0.06					

16. Table 3. Predicted vs. Observed Frequencies
(White Midwesterners)
(Predicted Values in ().)

I. Males:

	H							
	N				X			
	P		T		P		T	
	S	U	S	U	S	U	S	U
O	1 (0.9)	---	0 (0.2)	---	2 (1.9)	---	3 (2.3)	0 (1.7)
Y	---	---	0 (1.0)	1 (0.4)	6 (5.6)	2 (2.8)	5 (5.3)	4 (2.1)

	A							
	N				X			
	P		T		P		T	
	S	U	S	U	S	U	S	U
O	---	---	---	---	---	1(0.9)	---	---
Y	---	---	---	---	1(0.9)	---	1(0.5)	0(0.1)

	C							
	N				X			
	P		T		P		T	
	S	U	S	U	S	U	S	U
O	---	---	---	---	1(0.9)	---	0(0.6)	---
Y	---	---	0(0.2)	---	---	---	1(1.4)	---

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II. Females:

	H							
	N				X			
	P		T		P		T	
	S	U	S	U	S	U	S	U
O	1(0.9)	---	---	1(0.2)	---	---	5(4.0)	0(0.3)
Y	---	---	1(0.5)	---	---	---	5(6.5)	0(0.6)

	A							
	N				X			
	P		T		P		T	
	S	U	S	U	S	U	S	U
O	---	---	---	---	---	---	0(0.1)	---
Y	---	---	0(0.2)	---	---	---	0(0.3)	---

	C							
	N				X			
	P		T		P		T	
	S	U	S	U	S	U	S	U
O	---	---	---	---	---	---	---	---
Y	---	---	0(0.2)	---	---	---	3(1.4)	0(0.2)

The final section of this paper is a brief discussion of those instances where the entire article is deleted. On the whole, the number of cases was too small to run on the computer program. I found examples of the deleted article in all three groups, not just for the Black or the White Southern informants. The number of instances for each group is given in Table 4 (no. 17 on the Handout). (Instances before a pause are not counted.) The numbers here are small, and although percentages may be misleading, they are interesting in each case. Table 5 (no. 18 on the Handout) gives the percentages. They show a shift to greater frequency for females as opposed to males. Also there is a shift to greater frequency from Blacks to White Southerners to White Midwesterners, a shift which is opposite to the rate of /n/ deletion for each group.

17. Table 4. Article Deletion

	White Sou.	Black Midw.	White Midw.
Male	9/41	8/57	4/15
Female	---	15/51	7/14
Total	---	23/108	11/29

18. Table 5. Article Deletion (%)

	White Sou.	Black Midw.	White Midw.
Male	22.0	14.1	26.7
Female	---	29.4	50.0

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Concerning the phonetic environment of the deleted article, many do occur either before or after /ə/ or unstressed /ɪ/ (23 out of 43 total), but many do not. So the explanation that the deleted article represents a merging with an unstressed vowel can explain only about half of the number of instances. Some may be due to deletion of /n/ after /ə/ has been deleted, as in the derivation of "I got A" in no. 19 on the Handout.

19. /gàtənéy/ ⟶ /gàtnéy/ ⟶ /gàtéy/

Other examples may be caused by simply deleting the whole article an when another vowel+/n/ follows (by haplology), as in "every place where incident takes place" and "must be engineer." More data is needed, of course, to substantiate these possible explanations.

By way of conclusion, the statement I have just made applies to this whole paper: "more data is needed." I was able to collect data for the Southern White group and the Black speakers for what is probably an adequate number of environments, but for the White Midwesterners I could fill only 32 out of 96 cells for the different factor groups. Also many of the cells in Tables 1, 2, and 3 have only one occurrence in them.

Despite these shortcomings, particularly as they affect the computer program, there are some conclusions we can draw. First, there is a wide variation in the pronunciation of the indefinite article before a word beginning with a vowel. It isn't always /ən/. Frequently it is /ə/ and sometimes the entire article disappears. Reduction of an to /ə/ occurs

most frequently for Black speakers, and very frequently for White informants from Louisiana. For White Midwesterners /ə/ does occur, but its frequency is much less than for the other groups.

Second, where there is evidence of style shifting for the Black informants depending on the race of the interviewer, the variation between /ə/ and /ən/ does not show style shifting. There are more occurrences of /ə/ for an in the interviews conducted by Whites. Further evidence that an does not show style shifting is that I found no hypercorrect forms (i.e., an before a consonant) in any of my research. Also the occurrence of /ə/ and /ey/ in the formal style of television interviews runs counter to the hypothesis of style shifting.

Third, for the linguistic factors affecting the deletion of /n/, the feature that favors the rule the most is a pause between the article and the following word. This is seen from the data on the White Midwestern group. Other factors that favor application of the rule can be seen in the data from the other groups, which I ran together through the computer program. The weights assigned to the different features (given in no. 20 on the Handout) are

1. Compound
2. Following nasal
3. Preceding nasal
4. Headword
5. Stressed vowel

20. Non-application probabilities model ($p_o = 0.21$)

H - 0.19 N - 0.27 S - 0.07 O - 0.51 L - 0.0 (La. White)
A - 0.0 X - 0.0 U - 0.0 Y - 0.0 B - 0.51(Black Midw.)
C - 0.64

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These conclusions represent a first attempt to deal with the variation found in a single linguistic form, the indefinite article an, and to give it a variable rule analysis according to the Cedergren/Sankoff program. More data is needed to substantiate the claims made in this paper, data from a wider range of social classes, ages, and styles, and from more varied geographic regions.